



# UNITED STATES PATENT AND TRADEMARK OFFICE

*W*

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/827,046

04/19/2004

Brent R. Jones

A2031Q-US-DIV

2389

7590

08/25/2006

Patent Documentation Center

Xerox Corporation

Xerox Square 20th Floor

100 Clinton Ave. S.

Rochester, NY 14644

EXAMINER

LIANG, LEONARD S

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/827,046

Applicant(s)

JONES ET AL.

Examiner

Leonard S. Liang

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4-6 and 15-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-30 is/are allowed.
- 6) ☒ Claim(s) 4-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 06/09/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION*****Claim Rejections - 35 USC § 103***

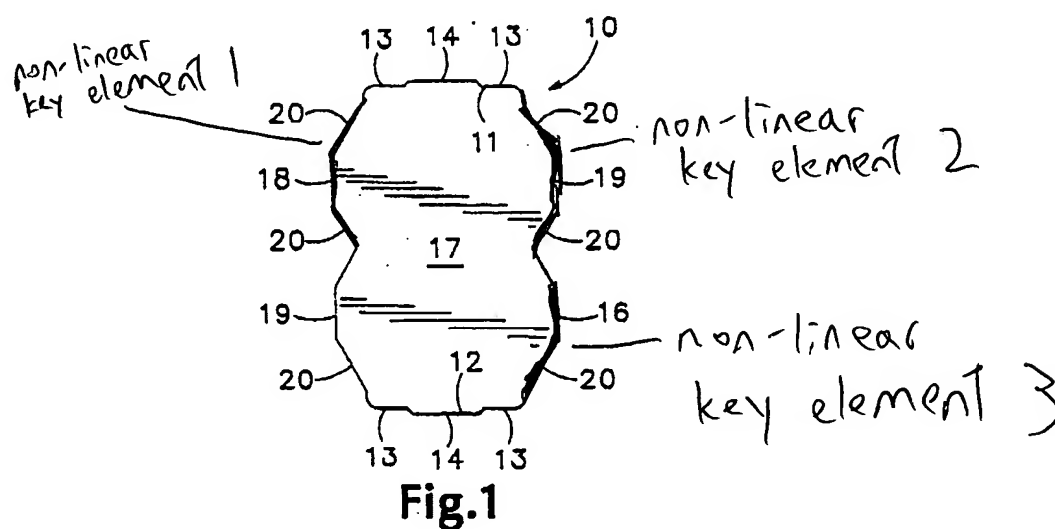
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al (US Pat 5510821) in view of Crawford (US Pat 5784089).

Jones et al discloses:

- {claim 4} An ink stick for use in a solid ink feed system of a phase change ink jet printer (figure 1); wherein the ink stick insertion perimeter includes at least three nonlinear key elements (see drawn-in refs); wherein the first and second nonlinear key elements do not intersect one another (see drawn-in refs)



Art Unit: 2853

- {claim 5} wherein the ink stick insertion perimeter includes at least one linear perimeter segment between the first nonlinear key element and the second nonlinear key element (figure 1, reference 13)

Jones et al differs from the claimed invention in that it does not disclose:

- {claim 4} wherein the ink feed system comprises a feed channel having a feed direction and an insertion opening permitting insertion of an ink stick in an insertion direction, different from the feed direction, into the feed channel; an ink stick body having an ink stick insertion perimeter in a plane substantially perpendicular to the insertion direction; wherein a first of the nonlinear key elements is along a first portion of the ink stick insertion perimeter that is substantially perpendicular to the feed direction; wherein the first nonlinear key element has a shape substantially identical to the shape of a portion of the insertion opening
- {claim 6} wherein each of the nonlinear key elements has a shape substantially identical to the shape of a portion of the insertion opening of the solid ink feed system

Crawford discloses:

- {claim 4} wherein the ink feed system comprises a feed channel having a feed direction and an insertion opening permitting insertion of an ink stick in an insertion direction, different from the feed direction, into the feed channel (figure 1, reference 24A-D, 25A-D)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Crawford into the invention of Jones et al. The motivation for the skilled artisan in doing so is to gain the benefit of providing a keying system which prevents improper insertion of ink sticks into the feed channel. The combination naturally suggests:

- {claim 4} an ink stick body having an ink stick insertion perimeter in a plane substantially perpendicular to the insertion direction; wherein a first of the nonlinear key elements is along a first portion of the ink stick insertion perimeter that is substantially perpendicular to the feed direction; wherein the first and second nonlinear key elements each have a shape substantially identical to the shape of a portion of the insertion opening
- {claim 6} wherein each of the nonlinear key elements has a shape substantially identical to the shape of a portion of the insertion opening of the solid ink feed system

#### ***Allowable Subject Matter***

Claims 15-30 are allowed.

#### ***Response to Arguments***

Applicant's arguments with respect to claims 4-6 and 15-30 have been considered but are moot in view of the new ground(s) of rejection. The examiner would like to note with appreciation that the applicant's response to arguments were creative and well written. The

Art Unit: 2853

examiner was persuaded with respect to all the claims. However, the examiner found an alternate, yet still proper interpretation of the art previously used for claims 4-6. That is why the same art is used in this new non-final rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S. Liang whose telephone number is (571) 272-2148. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

08/19/06

lsl

LSL



**STEPHEN MEIER**  
**SUPERVISORY PATENT EXAMINER**